Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

DEVAL L. PATRICK
Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

December 6, 2013

Mr. Jason Kudelka
Poly-Metal Finishing, Inc.
1 Allen Street, Building #218
Springfield, MA 01108

RE: Springfield
Transmittal No.: X257251
Application No.: WE-13-026
Class: *SM-50*
FMF No.: 29761
AIR QUALITY PLAN APPROVAL

Administrative Amendment

Dear Mr. Kudelka:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Waste Prevention, has reviewed your Non-major Comprehensive Plan Application ("Application") listed above. This Application concerns the proposed construction and operation of an additional spray booth at your aluminum anodizing and metal finishing facility located at 1 Allen Street, Building #218 in Springfield, Massachusetts ("Facility"). The Application bears the seal and signature of Thomas Couture, Massachusetts Registered Professional Engineer number 27553.

In addition, this Plan Approval assigns MassDEP emission unit (EU) numbers and changes the facility contact from Ronald Bevan, Sr. to Jason Kudelka. It also includes requirements from previous Plan Approvals to:

- operate a methyl ethyl ketone (MEK) distillation unit (1P-91-003), May 1, 1991;
- operate a chrome anodizing line with an associated roof mounted scrubber, conduct MEK masking and stripping operations, and operate four manual paint spray booths (1-P-03-027, August 6, 2004);
- Replace three spray booths (1-P-05-003, February 11, 2005).

This Plan Approval is intended to subsume all previous Plan Approvals.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control," regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review

of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

Plan Approval #WE-13-026, which was issued on November 27, 2013, has been administratively amended by MassDEP to clarify the reporting requirements in Table 5. Provision #5 of Table 5 has been deleted from the previous version and replaced with requirements that comprehensively call out Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) reporting requirements for EU 2, EU 4, EU 5, and facility-wide emissions.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

This amended Plan Approval is intended to supersede Plan Approval # WE-13-026 dated November 27, 2013 and the amendment to Plan Approval #WE-13-026, issued December 2, 2013 in their entirety.

1. DESCRIPTION OF FACILITY AND APPLICATION

Poly-Metal Finishing, Inc. ("Poly-Metal") is an aluminum anodizing/metal finishing company which produces protective aluminum oxide coatings on various metal parts, components and assemblies primarily for the aerospace and defense-related markets. Anodizing produces a film that is conducive to paint adhesion and improved corrosion resistance. Some parts are completely anodized, while others are only partly anodized so that the base metal remains exposed, depending on customer specifications.

The areas that Poly-Metal does not want to anodize are masked through the use of tapes, plugs and/or a hand applied masking product (323 Stop Off, or equivalent). Following the application of the masking agent, the part is anodized. After anodizing, the masking needs to be removed and the part is cleaned. Masking (tape, plugs) is removed through mechanical means or, in the case of 323 Stop Off removal, by use of three (3) tanks containing methyl ethyl ketone (MEK). Poly-Metal has two (2) Ramco Equipment Corporation Model MKD24SCC Units and one (1) Accent on Industrial Metals, Inc. unit.

Prior to shipping, parts (or areas of parts) have a primer coating applied to impart physical properties (improved adhesion, abrasion resistance, etc.), depending on customer specifications. Primer coatings are applied within the spray booths. The submitted Non-Major CPA application is for the construction and operation of an additional spray booth.

MEK Distillation Unit

The facility received previous plan approval for a "Siva R-2" solvent recovery unit (1P-91-003). At the time, the unit was estimated to emit 0.12 pounds of MEK each time it was opened following a distillation cycle. It was estimated that the unit could complete three cycles per day and accordingly, had a maximum potential emission rate of 131 pounds per year.

Chromium Anodizing

Anodizing begins by immersing the part into a sodium hydroxide bath to remove dirt and impurities from the surface. The parts are then rinsed in a sulfuric acid and chromic acid bath to deoxidize the part, removing any oxides or weakened surface layers. The parts are then rinsed and immersed into chromic acid for anodizing. The anodizing process produces an anodic film that is conducive to paint adhesion and improved corrosion resistance. The parts are then removed from the anodizing process and rinsed in either hot water or nickel acetate to seal the surface.

Poly-Metal utilizes a chromic acid mist eliminator scrubber ("scrubber") to control emissions from the anodizing process. The scrubber consists of two scrubbing stages followed by a third stage that is a mist eliminator. The first two stages are continuously washed down with water. The third stage requires the equipment to be shut down to clean. The scrubber is exhausted at

ambient temperature through a 2.4 foot inner diameter stack which is 11 feet above roofline. The stack gas exits at an approximate velocity of 58 feet per second.

Spray Booths

Poly-Metal currently operates four (4) spray booths for priming and coating various metal parts following anodizing and, if applicable, removal of the masking. These spray booths received previous plan approval (1-P-03-027 and 1-P-05-003) and are grouped as EU 4 in this plan approval. Spray Booth 4 is located apart from the others and is used for small, specific surface coating operations. Dry Film #7, Lubrabond 320 and Everlube 620C are the only products used in Spray Booth 4. These products are not anticipated to be sprayed in the new spray booth.

Similar to the existing spray booths, Spray Booth 5 (EU 5) will have a two-layered Chemco PD Media fiberglass filter, or equivalent. The first layer is a pre-filter and is placed over a primary filter. According to manufacturer specifications, this filter operates with 98.95% efficiency. Pressure drop across the filter will be measured with a magnehelic gauge. Spent filters from the existing spray booths are currently disposed of as hazardous waste. The face velocity across the filter is expected to be approximately 114 ft/min and no more than 200 ft/min. Spray Booth 5 shall have a separate stack that discharges vertically upward as specified in Table 7.

Spray Booth 5 will be installed in conjunction with a new positive pressure makeup air system that will ensure that positive air pressure is maintained within the spray booth room to minimize possible contamination from outside areas. The makeup air ventilation system and spray booth exhausts (equipped with variably controlled exhaust fans) will be monitored by an automatic differential pressure gauge to ensure positive pressure in the spray booth room and proper exhaust flow through the spray booth and out the stack. The new spray booth will be designed to shut down in the event of a system malfunction such as high differential pressure, low make-up air, or no spray booth exhaust.

Poly-Metal operates one Astro Pneumatic AST-4535W fully enclosed gun cleaner which will be located within close proximity of the new spray booth and Spray Booths 1-3.

Poly-Metal does not utilize any solvents during surface preparation of the part prior to coating.

Regulatory Applicability

Poly-Metal's new spray booth has a potential to emit, without controls, greater than 10 tons per year of an air pollutant and is therefore subject to 310 CMR 7.02(5), Comprehensive Plan Approval.

Poly-Metal is not able to adopt the Permit by Rule standards of 310 CMR 7.03(16) for paint spray booths because they cannot meet the coating requirements, since the majority of their work is military based. However, they will use high volume low pressure (HVLP) spray guns in the new booth.

Poly-Metal will perform coating operations within the new spray booth. A majority of the coatings used by Poly-Metal are military specifications (mil specs) that do not meet the limit of 6.7 lb_{voc}/gal_{solids} specified in 310 CMR 7.18(11), *Surface Coating of Miscellaneous Metal Parts and Products.*[1] Alternative coatings are not possible or available due to mil spec requirements.

As a result, Poly-Metal will limit their potential VOC emissions from facility-wide miscellaneous metal parts coating operations to 9.9 or less tons per year, below the 10 ton per year threshold of 310 CMR 7.18(11). Poly-Metal will adhere to the limit of 6.7 lb_{voc}/gal_{solids} when they are coating non-mil spec parts. Records documenting that military specification precluded the use of lower VOC coatings will be kept by Poly-Metal.

The construction and operation of Spray Booth 5 is subject to the Best Available Control Technology (BACT). For BACT, Poly-Metal will use a combination of best management practices, pollution prevention, and limitations on their hours of operation and/or raw material usage while limiting their 12 month consecutive facility emissions to less than 18 tons VOC and HOC combined; less than 18 tons of total organic material HAP; and less than ten tons of a single organic material HAP.

Poly-Metal's chromium anodizing operation is subject to the federal regulation *National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks* (40 CFR Part 63 Subpart N; hereinafter "Chromium Plating NESHAP"). Currently, under the Chromium Plating NESHAP, decorative and anodizing chrome plating tanks are subject to an emission limit of 0.01 mg/dscm or a surface tension limit of 45 dynes per centimeter.[2] As of September 19, 2014 this emission limit will be reduced to 0.007 mg/dscm (3.1×10^{-6} gr/dscf). Poly-Metal tested their scrubber in 2010 and this testing demonstrated that the scrubber controlled chromium emissions to an average of 0.001 mg/dscm. Because the performance test was conducted after January 25, 1995, Poly-Metal is able to use these test results in lieu of additional performance testing (40 CFR 63.344(b)(1)(v)).

As stated previously, Plan Approval 1-P-03-027 approved three de-masking units and specified that the chemical removal shall be performed in units which comply with 310 CMR 7.18(8)(a), as a technology transfer from the rules for solvent metal degreasing. Metal part cleaning is taking place within the unit. For that reason, the equipment specifications from 310 CMR 7.18(8) for the de-masking units is included in Table 6, Special Terms and Conditions.

MEK was removed from the list of Hazardous Air Pollutants (HAPs) 42 U.S.C. §7412(b) effective December 19, 2005. Accordingly, with this application, Poly-Metal is lowering their facility-wide HAP emission limits from 7.5 tpy to 5 tpy.

[1] VOC means Volatile Organic Compound.

[2] Plan Approval #1-P-03-027, August 6, 2004

The majority of spray applications used at Poly-Metal are adhesive primers that would normally be subject to the Adhesives and Sealants regulations beginning May 1, 2016. However, Poly-Metal coats aerospace parts only. Therefore in accordance with 310 CMR 7.18(30)(d)3.c., beginning May 1, 2016, Poly-Metal will only be subject to the work practices outlined in 310 CMR 7.18(30)(c)8 and included in Table 6, Special Terms and Conditions.

In addition to being subject to the BACT requirements of 310 CMR 7.02(8)(a)2., the spray booth is subject to the visible emission requirements of 310 CMR 7.06, the dust, odor, construction and demolition requirements of 310 CMR 7.09 and the noise reduction requirements of 310 CMR 7.10.

It is the opinion of the Department that the paint booth modifications described in this plan application are consistent with modern air pollution control technology and Best Available Control Technology. The Department hereby grants **Final Approval** for the modifications described herein and in the submittal pursuant to Regulation 310 CMR 7.02(5)(a), subject to the following provisions:

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1

EU#	Description	Design Capacity	Pollution Control Device (PCD)
1	• MEK recovery distillation tower[1]	1 gal/hr	• N/A
2	• MEK Masking and Stripping Operations[2]	-	• N/A
3	• Anodizing Tank[2]	-	• Chromic Acid Mist Eliminator Scrubber
4	• Spray Booths 1, 2, 3 and 4[3]	N/A	• Particulate Matter Filter
5	• Spray Booth 5 spray guns, spray gun cleaner, clean-up operations	N/A	• Chemco PD Media Particulate Matter Filter

Table 1 Key:
1 = Prior approval through #1P-91-003, May 1, 1991
2 = Prior approval through #1-P-03-027, August 6, 2004
3 = Prior approval through #1-P-03-027, August 6, 2004 and #1-P-05-003, February 11, 2005
EU# = Emission Unit Number
MEK = Methyl Ethyl Ketone
N/A = Not Applicable
PCD = Pollution Control Device

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2 below:

Table 2

EU#	Operational / Production Limit	Air Contaminant	Emission Limit
2, 4	1. Methyl Ethyl Ketone (MEK) masking and stripping operations, and operation of four manual paint spray booths	VOC	1.0 TPM 8.5 TPY[1]
		HAP	1.0 TPM 7.5 TPY[1]
3	2. Site-specific pressure drop using procedures from §63.344(d)(5) An owner or operator may conduct multiple performance tests to establish a range of compliant pressure drop values, or may set as the compliant value the average pressure drop measured over the three test runs of one performance test and accept ± 1 inch of water column from this value as the compliant range.[1]	HAP	0.01 mg/dscm [1] 0.007 mg/dscm effective 09/17/2014
4	3. Coatings shall be less than or equal to 6.7 lbs. VOC per gallon solids applied[1,2] Coatings with higher VOC content can be used if required by contract specifications (military specifications). Documentation must be maintained on-site to verify this requirement[1, 2]	VOC	-
	4. > 97% efficient filter[1, 2]	PM	N/A

Table 2			
EU#	**Operational / Production Limit**	**Air Contaminant**	**Emission Limit**
4, 5	5. All miscellaneous metal parts coating	VOC	2 TPM 9.9 TPY
	6. Replace filters when differential pressure drop across the filters reaches manufacturers recommended pressure drop for replacement. 7. Face velocity of the air filter shall not exceed 200 ft/min.	PM	-
5	8. ≥ 98.95% efficiency of filter	PM	0% Opacity
	9. Coating usage limited to 560 gallons per calendar month & 2,800 gallons/12 consecutive month period. 10. Coatings shall be less than or equal to 6.7 lbs. VOC per gallon solids applied when coating non-mil spec parts	VOC	2 TPM 9.9 TPY
	-	HAPs	1 TPM 5 TPY
Facility-wide	-	PM	0.1 TPM 0.5 TPY
		VOC	3 TPM 15.9 TPY
		HAPs	1 TPM 5 TPY

Table 2 Key:
1=Plan Approval #1-P-03-027, August 6, 2004
2 = Plan Approval #1-P-05-003, February 11, 2005
EU# = Emission Unit Number
PM = Total Particulate Matter
PM_{10} = Particulate Matter less than or equal to 10 microns in diameter
$PM_{2.5}$ = Particulate Matter less than or equal to 2.5 microns in diameter
VOC = Volatile Organic Compounds
HAP (single) = maximum single Hazardous Air Pollutant
HAPs (total) = total Hazardous Air Pollutants.
TPM = tons per month
TPY = tons per consecutive12-month period

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5 below:

Table 3	
EU#	**Monitoring and Testing Requirements**
2	1. In accordance with 310 CMR 7.18(8)(h), upon request by MassDEP, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with a method approved by MassDEP and EPA.[1]
3	2. At all times, including periods of startup, shutdown, and malfunction, Poly-Metal shall operate and maintain its chromium electroplating equipment, including air pollution control devices and monitoring equipment, in a manner consistent with good air pollution control practices.[1]
	3. Poly-Metal shall comply with the following work practice standards at all times, including periods of normal operation, startup, shutdown, and malfunction:[1] a. Once per calendar quarter, visually inspect the scrubber to ensure there is proper drainage and no chromic acid buildup on the mesh pads. b. Once per calendar quarter, visually inspect the scrubber to ensure there is no evidence of chemical attack on the structural integrity of the device. c. Once per calendar quarter, visually inspect the composite mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist. d. Once per calendar quarter, visually inspect the exhaust system ductwork to ensure there are no leaks. e. Wash down the scrubber regularly in accordance with the O&M plan. f. Clean and inspect the magnehelic gauges and related connections once per calendar quarter. The magnehelic connections shall be cleaned by backflushing them with water or removing them from the duct and rinsing them with fresh water. The magnehelic gauges and related connections shall be checked for damage and replaced if cracked or fatigued.
	4. Poly-Metal shall establish as a site-specific operating parameter the pressure drops across the system, setting the value that corresponds to compliance with the applicable emission limitation, using the procedures in §63.344(d)(5). An owner or operator may conduct multiple performance tests to establish a range of compliant pressure drop values, or may set as the compliant value the average pressure drop measured over the three test runs of one performance test and accept ± 2 inch of water column from this value as the compliant range.[1]
	5. Poly-Metal shall monitor and record the pressure drop across each scrubber stage once each day that said equipment is in operation to demonstrate compliance with Provision 4 above.[1]
EU 4, 5	6. Poly-Metal shall, on a daily basis, monitor differential pressure across the filters and change out the filters when differential pressure reaches the manufactures recommended pressure for replacement[2]

Table 3	
EU#	**Monitoring and Testing Requirements**
	7. Poly-Metal shall, upon request of the Department, perform or have performed tests to characterize coating VOC and solids content according to USEPA prescribed methods to demonstrate compliance, such as Method 24.[2]
Facility-wide	8. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration
	9. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13

Table 3 Key:
1= Plan Approval #1-P-03-027, August 6, 2004
2= For EU 4 only - Plan Approval #1-P-03-027, August 6, 2004
EU# = Emission Unit Number
MassDEP = Massachusetts Department of Environmental Protection
O&M = Operation and Maintenance
VOC = Volatile Organic Compound
USEPA = United States Environmental Protection Agency

Table 4	
EU#	**Record Keeping Requirements**
2	1. Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:[1] a. identity, quantity, formulation and density of solvent(s) used; b. quantity, formulation and density of all waste solvent(s) generated; c. actual operational and performance characteristics of the unit and any appurtenant emissions capture and control equipment, if applicable; and d. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.
3	2. Poly-Metal shall keep the following records in a bound logbook and retain them for at least five years after the date of collection:[1] e. Records of inspections of the scrubber, and monitoring equipment to document that Poly-Metal complied with the work practice standards listed in Table 3, Provision (3) of this Approval. Such records shall include an identification of the device inspected, the date of inspection, a brief description of the working condition of the device during the inspection, and any actions taken to correct deficiencies. f. Records of all maintenance performed on the chromium anodizing tanks, scrubber, and monitoring equipment. g. Records of malfunctions of process equipment, air pollution control devices, and monitoring equipment. Such records shall include the identity of the malfunctioning equipment, the date and time of occurrence, the duration, and the cause (if known). h. Records of actions taken during periods of malfunction. Such records shall indicate whether or not the actions were consistent with the O&M plan. i. Test reports or other written records documenting the results of all performance tests, including descriptions of facility operating conditions during testing. j. Records of periods of excess emissions, including the date and time of commencement and completion and the reasons for excess emissions (if known).
	3. Pressure drop across each scrubber stage shall be retained for at least five years after the date of collection.[1]
4, 5	4. Poly-Metal shall establish and maintain a calendar month record of all coatings, inks or solvents used and the results of the reference test method (Method 24), if requested, or the manufacturer's formulation data used for determining VOC content of those coatings.[2]
	5. Poly-Metal shall maintain daily records to demonstrate compliance with Table 2 limits which shall include, but are not limited to:[2] a. Identity, quantity, formulation and density of coatings used b. Identity, quantity, formulation and density of any dilution additives and clean-up solvents. c. Solids content of any coating(s) used.
	6. All records shall be kept on site for a minimum of five (5) years from date of record and shall be made available to the Department upon request.[2]

Table 4	
EU#	**Record Keeping Requirements**
5	7. Sufficient records shall be prepared and maintained to demonstrate compliance for each calendar month. Such records shall include, but are not limited to: 1. For each coating, as applied: a. Gallons of coating used; b. Coating density (Pounds per gallon); c. Pounds of VOC per gallon of coating; d. Pounds of solids per gallon of coating; e. Pounds of water per gallon of coating; f. Pounds of other non-VOC liquid per gallon of coating; and g. Pounds of VOC per gallon of solids as applied. 2. Gallons of exempt/non-compliance coatings used; and 3. Gallons of cleanup solution used and pounds VOC per gallon; and 4. Maintenance records of filter pad replacement and disposal.
	8. Poly-Metal shall document when military specifications preclude the use of coating with a VOC content greater than 6.7 lb_{voc}/gal_{solids}.
	9. Poly-Metal shall document when military specifications preclude the use of HVLP paint spray guns.
	10. Poly-Metal shall include all emissions associated with surface preparation and/or cleanup solutions in the monthly and 12 month rolling emissions calculations to determine the Permittee's compliance status with emission limits contained in Table 2 above.
	11. Poly-Metal shall keep documentation of the particle control efficiency of the fabric filter material used in EU 5.
Facility-wide	12. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/dep/air/approvals/aqforms.htm#report .
	13. The Permittee shall maintain records of monitoring and testing as required by Table 3.
	14. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) and PCD(s) approved herein on-site.
	15. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.

Table 4	
EU#	**Record Keeping Requirements**
	16. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and PCD(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	17. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	18. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	19. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:
1= Plan Approval #1-P-03-027, August 6, 2004
2= For EU 4 - Plan Approval #1-P-03-027, August 6, 2004
EU# = Emission Unit Number
O&M = Operation & Maintenance
VOC = Volatile Organic Compound
PCD = Pollution Control Device
SOMP = Standard Operating and Maintenance Procedure
USEPA = United States Environmental Protection Agency

Table 5	
EU#	**Reporting Requirements**
3	1. Poly-Metal shall submit annual compliance status reports to the Department and EPA regarding compliance of the chromium anodizing equipment. However, if an exceedance of an emission limit occurs or if the total duration of malfunctions of the add-on pollution control device and monitoring equipment is 5 percent or greater of the operating time, the reporting frequency shall increase to semiannual. Exceedance reports shall be submitted by the 30th day following the end of each calendar year or half, as appropriate. The compliance status reports shall contain:[1] a. Total operating time of the chromium anodizing tank during the reporting period. b. Actual cumulative rectifier capacity expended during each month of the reporting period and the total for the entire reporting period. c. Summary of the pressure drop data for the scrubber during the reporting period, the total duration of excess emissions for each emission unit (as indicated by the pressure drop data), and the total duration of excess emissions for each emission unit expressed as a percent of the total unit operating time. d. A breakdown of the total duration of excess emissions into the time fractions that were due to process upsets, control equipment malfunctions, other known causes, and unknown causes. e. A certification by a responsible official that the work practice standards listed in Table 4, Provision 5 of this Approval were followed in accordance with the O&M plan. If Poly-Metal did not follow the O&M plan, the report shall explain why not. f. A description of any changes in monitoring, processes, or controls since the last reporting period.
	2. If Poly-Metal is required to submit chromium anodizing compliance status reports on a semiannual basis, it may request to reduce the reporting frequency to annually. The Department may grant such a request if:[1] a. Poly-Metal demonstrates a full year of compliance with the relevant emission limit following the last exceedance; b. Poly-Metal continues to comply with all applicable recordkeeping and monitoring requirements; and c. The Department does not object to the reduced reporting frequency after considering the factors listed in 40 CFR §63.347(g)(2)(ii).
4, 5	3. The Regional Bureau of Waste Prevention office must be notified by telephone or fax as soon as possible after the occurrence, but no later than one (1) business day after the occurrence, of any upsets or malfunctions to the facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air and a condition of air pollution.[2]
	4. Poly-Metal shall report within fifteen (15) days after the end of a calendar month if any emission limits are exceeded.[2]

Table 5	
EU#	**Reporting Requirements**
Facility-wide	5. The Permittee shall submit to MassDEP a report by no later than January 31 of each year which shall contain the records generated for the immediately preceding 12 consecutive month period consisting of the following: a. the actual emissions of VOCs and total HAPs emitted from EU #2 for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). b. the actual emissions of VOCs and total HAPs emitted from EU #4 for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). c. the actual emissions of VOCs and total HAPs emitted from EU #5 for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). d. the actual emissions of VOCs and total HAPs emitted facility-wide for each calendar month and for each consecutive twelve month period (current month plus prior eleven months).
	6. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	7. The Permittee shall notify the Western Regional Office of MassDEP, BWP Section Chief by telephone (413) 755-2115, email, Marc.Simpson@State.MA.US or fax (413) 784-1149, as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted toSection Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	8. The Permittee shall report annually to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.
	9. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP's request.
	10. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	11. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:
1= Plan Approval #1-P-03-027, August 6, 2004
2= For EU 4 - Plan Approval #1-P-03-027, August 6, 2004
EU# = Emission Unit Number
MassDEP = Massachusetts Department of Environmental Protection

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

A. The Permittee shall comply with the Special Terms and Conditions as contained in Table 6 below:

Table 6

EU#	Special Terms and Conditions
2	1. Poly-Metal shall store and dispose of volatile organic compounds (VOCs) in a manner which will minimize evaporation to the atmosphere. Proper storage shall be in a container with a tight fitting cover. Proper disposal shall include incineration in an incinerator approved by MassDEP, transfer to another person licensed by MassDEP to handle VOC, or any other equivalent method approved by MassDEP.[1]
	2. Poly-Metal shall perform masking agent chemical removal in units which comply with 310 CMR 7.18(8)(a)[1]
	3. Poly-Metal shall immediately repair any leaks, or the de-masking unit shall be shut down.
	4. The following requirements shall apply unless the de-masking unit is a sink like work area with a remote solvent reservoir with an open drain area less than 100 square centimeters. Poly-Metal shall: a. Each de-masking unit is equipped with a cover that is designed to be easily operated with one hand; b. Each de-masking unit is equipped to drain clean parts so that, while draining, the cleaned parts are enclosed for 15 seconds or until dripping ceases, whichever is longer; c. Each de-masking unit is designed with: i. a freeboard ratio of 0.75 or greater; or ii. a water blanket (only if the solvent used is insoluble in and heavier than water); or iii. an equivalent system of air pollution control which has been approved by the Department and EPA; d. The covers of each de-masking unit are closed whenever parts are not being handled in the unit, or when the unit is not in use; and e. The drafts across the top of each de-masking unit are minimized such that when the cover is open the unit is not exposed to drafts greater than 40 meters per minute (1.5 miles per hour), as measured between one and two meters upwind at the same elevation as the tank lip.

Table 6	
EU#	**Special Terms and Conditions**
	5. Poly-Metal shall operate any de-masking unit using procedures which minimize evaporative emissions and prohibit spills from the use of said unit. Such procedures include but are not limited to: a. notification to operators of the performance requirements that must be practiced in the operation of the unit, including the permanent and conspicuous posting of labels in the vicinity of the unit detailing performance requirements; and b. storage of waste solvent in closed containers, and disposal or transfer of waste solvent to another party, in a manner such that less than 20% of the waste solvent by weight can evaporate in to the atmosphere; and c. where applicable, supplying a solvent spray which is a continuous fluid stream (not a fine, atomized or shower type spray) at a pressure which does not exceed ten pounds per square inch as measured at the pump outlet, and use any such spray within the confines of the unit.
	6. Poly-Metal shall maintain instantaneous and continuous compliance at all times.
3	7. Poly-Metal shall prepare, implement and maintain up to date an Operation and Maintenance Plan ("O&M plan") immediately upon the issuance of this Approval. The O&M plan shall include the following elements:[1] a. The operation and maintenance criteria for the electroplating equipment, air pollution control devices, and monitoring equipment; b. The work practice standards listed in Table 3, Provision (3) of this Approval; c. Procedures to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur; and d. A systematic procedure for identifying malfunctions of process equipment, air pollution control devices, and monitoring equipment and for implementing corrective actions to address such malfunctions.
	8. If the O&M plan fails to adequately address a malfunction, Poly-Metal shall revise the plan within 45 days after such an event occurs. If actions taken during a period of malfunction are inconsistent with the procedures specified in the O&M plan, Poly-Metal shall report such actions to the Department and EPA by phone or fax within two working days after commencement of the actions. This report shall be followed by a written report to the Department and EPA within seven working days after the end of the event.[1]
4, 5	9. Poly-Metal shall use low VOC, water based coating whenever possible
	10. Poly-Metal shall use HVLP spray guns whenever possible
	11. The spray application of coatings that contain the target HAP, as defined in 40 CFR Section 63.11180, to a plastic and/or metal substrate may be subject to Subpart HHHHHH of the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations, 40 CFR 63.11169 through 63.11180. Since MassDEP has not accepted delegation for 40 CFR Part 63 Subpart HHHHHH for sources which are not subject to 310 CMR Appendix C (Operating Permit sources), you are advised to consult with the USEPA for additional information. There may be additional notification, recordkeeping and reporting requirements. The address is EPA-Air Branch, 1 Congress Street, Suite 1100, Boston, Massachusetts, 02114-2023.

Table 6	
EU#	**Special Terms and Conditions**
	12. Store all VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning, and rework in closed containers (310 CMR 7.18(30)(c)8.a.)
	13. Ensure that mixing and storage containers used for VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning and rework are kept closed at all times except when depositing or removing these materials (310 CMR 7.18(30)(c)8.b.)
	14. Minimize spills of VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning, and rework (310 CMR 7.18(30)(c)8.c.)
	15. Convey VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning, and rework from one location to another in closed containers or pipes (310 CMR 7.18(30)(c)8.d.)
	16. Minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that: a. equipment cleaning is performed without atomizing the cleanup solvent; and, b. all spent solvent is captured in closed containers (310 CMR 7.18(30)(c)8.e.)
	17. Store and dispose of all absorbent materials, such as cloth or paper, that are contaminated with VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, or VOC-containing materials used for surface preparation, cleaning, and rework in non-absorbent containers that shall be kept closed except when placing materials in or removing materials from the container (310 CMR 7.18(30)(c)8.f.)
5	18. Filter media shall be disposed in accordance with all applicable MassDEP regulations
	19. Spray guns shall be cleaned in a device that: a. minimizes solvent evaporation during the cleaning, rinsing, and draining operations; b. recirculates solvent during the cleaning operation so that the solvent is reused; and, c. collects spent solvent in a container with a tight-fitting cover so that it is available for proper disposal or recycling. (310 CMR 7.03(16)(h))
	20. The paint spray booth shall have a stack conforming to the following criteria: a. The stack shall discharge vertically upwards; b. The stack shall not have rain protection of a type that restricts the vertical exhaust flow; c. The stack gas exit velocity shall be greater than 40 feet per second; and; d. The minimum stack exit height shall be 35 feet above the ground or ten feet above roof level.
	21. Spray Booth 5 shall utilize two or more layers of dry fiber mat filter with a total thickness of at least two inches or an equivalent system as determined in writing by MassDEP and that achieves a particulate control efficiency of at least 99 percent (%) by weight. Filter material shall be disposed of in accordance with all applicable MassDEP regulations. In addition, the face velocity of air at each filter shall not exceed 200 feet per minute.

Table 6	
EU#	**Special Terms and Conditions**
	22. Spray guns shall utilize the following method of spray application and be maintained or operated in accordance with the recommendations of the manufacturer: a. HVLP (DeVilbiss EGHV-531-397E spray application with 0.070 inch/1.8mm Fluid Tip, or equivalent); or b. Any other coating application method that achieves a transfer efficiency equivalent to electrostatic or HVLP spray application and is approved by MassDEP in writing.
Facility-wide	23. All air pollution control system monitoring devices including, but not limited to, differential pressure gauges, pressure tap lines, flow rate meters, and chart recorders shall be maintained in good working order and calibrated in accordance with the manufacturers recommendations.
	24. Spraying operations shall not be conducted outside of the spray booth.
	25. Any prior Plan Approvals issued under 310 CMR 7.02 shall remain in effect unless specifically changed or superseded by this Plan Approval. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in the prior Plan Approval(s) unless specifically altered by this Plan Approval.

Table 6 Key:
EU# = Emission Unit Number
MassDEP = Massachusetts Department of Environmental Protection
EPA = Environmental Protection Agency
O&M= Operation & Maintenance
VOC = Volatile Organic Compound
HAP = Hazardous Air Pollutant
HVLP – High Volume Low Pressure

B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as "shanty caps" and "egg beaters." The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7 below, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU#	**Stack Height Above Ground (feet)**	**Stack Inside Exit Dimensions (feet)**	**Stack Gas Exit Velocity Range (feet per second)**	**Stack Gas Exit Temperature Range (^{o}F)**
5	25	2	40	Ambient

Table 7 Key:
EU# = Emission Unit Number
^{o}F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).

B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.

C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.

D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose

of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.

F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.

G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.

H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.

I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.

J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.

K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Amy Stratford by telephone at 413-755-2144, or in writing at the letterhead address.

Marc Simpson
Permit Chief
Bureau of Waste Prevention

Enclosure

ecc: Timothy Kucab, Tighe & Bond, Inc.
MassDEP/Boston - Yi Tian
MassDEP/WERO - Peter Czapienski